RD-25,905/USA

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Guida et al.

Applicants' Docket No. RD-25,905/USA

For **High Resolution Anti-Scatter X-ray Grid and Laser Fabrication Method**

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, DC 20231

S I R:

Prior to examination, please amend this application as follows.

IN THE CLAIMS:

Please cancel claims 13 and 14.

Please amend claim 10 as follows:

10 (amended). A system for patterning a substantially transparent polymer substrate of an anti-scatter x-ray grid, the system comprising:

a high power laser for providing laser light;

a beam homogenizer for conditioning the laser light; and

a phase mask for creating a pattern of the conditioned laser light while reducing an amount of the conditioned laser light which is lost to the phase mask;

the laser, the beam homogenizer, and the phase mask being positioned for ablating openings having slopes less than or equal to 0.25 degrees and extending completely through an anti-scatter x-ray grid substrate having a thickness ranging from 0.3 millimeters to 1.5 millimeters

[a movable table for supporting the substrate and moving the substrate so that different areas of the substrate can be exposed to the pattern of the conditioned laser light].

Please add new claims 18-21 as follows:

18. A system for fabricating an anti-scatter x-ray grid for medical diagnostic radiography, the system comprising:

a sub-system for providing a high laser beam fluence with low beam divergence, the sub-system including (a) a phase mask between a substantially transparent substrate and a high power laser and (b) a beam homogenizer for conditioning the laser beam to optimize utilization of beam energy delivered by the laser;

means for ablating portions of the substrate through the phase mask with the conditioned laser beam;